

# **EXHIBIT 1**

**U.S. Patent No. 7,519,814 (“’814 Patent”)**

Accused Instrumentalities: IBM products and services using secure containerized applications, including without limitation IBM’s Cloud Kubernetes Service (IKS), IBM Cloud Private (ICP), and IBM Hybrid Cloud mesh, and all versions and variations thereof since the issuance of the asserted patent.

Each Accused Instrumentality infringes the claims in substantially the same way, and the evidence shown in this chart is similarly applicable to each Accused Instrumentality. Each claim limitation is literally infringed by each Accused Instrumentality. However, to the extent any claim limitation is not met literally, it is nonetheless met under the doctrine of equivalents because the differences between the claim limitation and each Accused Instrumentality would be insubstantial, and each Accused Instrumentality performs substantially the same function, in substantially the same way, to achieve the same result as the claimed invention. Notably, Defendant has not yet articulated which, if any, particular claim limitations it believes are not met by the Accused Instrumentalities.

**Claim 1**

Claim 1	Accused Instrumentalities
[1pre] 1. In a system having a plurality of servers with operating systems that differ, operating in disparate computing environments, wherein each server includes a processor and an operating system including a kernel a set of associated local system files compatible with the processor, a method of providing at least some of the servers in the system with secure, executable, applications related to a service, wherein the applications are executed in a secure environment, wherein the applications each	<p>To the extent the preamble is limiting, IBM practices, through the Accused Instrumentalities, in a system having a plurality of servers with operating systems that differ, operating in disparate computing environments, wherein each server includes a processor and an operating system including a kernel a set of associated local system files compatible with the processor, a method of providing at least some of the servers in the system with secure, executable, applications related to a service, wherein the applications are executed in a secure environment, wherein the applications each include an object executable by at least some of the different operating systems for performing a task related to the service, as claimed.</p> <p>For example, IBM Cloud Kubernetes Service runs on individual servers, each of which runs an independent operating system running either on bare metal, through an on-premises virtualized infrastructure, through one or more cloud services, or through any other supported deployment.</p> <p><i>See claim limitations below.</i></p> <p><i>See also, e.g.:</i></p>

Claim 1	Accused Instrumentalities
<p>comprising one or more of the executable applications and a set of associated system files required to execute the one or more applications, for use with a local kernel residing permanently on one of the servers;</p>	<p>For example, IBM Cloud Kubernetes stores application containers, sometimes called Docker containers, container images, Kubernetes containers, or Kubernetes pods, in persistent storage available to each node running the application. The container might be in a format defined by the Open Container Initiative. This storage may be physically attached to the server or connected through any supported interconnect, including over a network. Each container includes the application software as well as a Linux user space required to execute the application, for example libc/glibc and other shared libraries, configuration files, etc. necessary for the application. For example, the container includes a base OS image, provided by IBM or by a third party, such as a CentOS, RHEL, or Ubuntu base image. The container is compatible with the host kernel, for example because the container libraries are linked against the Linux kernel, and the supported host operating systems also use the Linux kernel, which has a stable binary interface.</p> <p><i>See, e.g.:</i></p> <p>Containers use a form of operating system (OS) virtualization. Put simply, they leverage features of the host operating system to isolate processes and control the processes' access to CPUs, memory and disk space.</p> <p><a href="https://www.ibm.com/blog/containers-vs-vms/">https://www.ibm.com/blog/containers-vs-vms/</a></p> <p>Today Docker containerization also works with Microsoft Windows and Apple MacOS. Developers can run Docker containers on any operating system, and most leading cloud providers, including Amazon Web Services (AWS), Microsoft Azure, and IBM Cloud offer specific services to help developers build, deploy and run applications containerized with Docker.</p> <p><a href="https://www.ibm.com/topics/docker">https://www.ibm.com/topics/docker</a></p>